

**FAA PUBLIC WORKSHOP
ON URBAN NONMILITARY HELICOPTER NOISE
WASHINGTON, DC
AUGUST 16, 2000**

The hearing was called to order by Mr. Sandy Liu at 8:35 a.m.

Following were in attendance:

Name	Affiliation	Name	Affiliation
Sandy R. Liu	FAA-AEE-100	Gregg Fleming	US DOT/VOLPE
Paul Schomer	USA CERL	Chris Roof	US DOT/VOLPE
Jeff Jacquat	McCarran Airport	Glenn MacDonald	Liberty Helicopter
Darren Schaefer	Liberty Helicopter	Roy Resavage	HAI
John Leverton	AHS International	Joy A. Held	Hel.Noise Coal. NY
Ben Sim	U of MD	Marc Gervais	U of MD
Bill Sanderson	HAI	Norm Mowbray	BHTI
Troy Gaffey	BHTI	Thelma Bullinger	AFS-820
Joe Corrao	HAI	Irene Howie	Mercy Air
Eric Jacobs	Sikorsky	Ella Atkins	U of MD
Ella Atkins	U of MD	Mustapha Chetab	U of MD
Kolie Lombard	FAA AFS-410(con)	Heather Frutiger	Glenwood Aviation
John Gialdiar	Helicopter News	Matt Zuccaro	Helicopter Council
Julian King	GAO	Steve Evered	RF, Inc.
John Welby	Welby Assoc.	Rachelle Razon	AAF-10
Chris Reese	AAF-10	James Glass	ANS-400
Patrick Mallen	Whisper Jet Inc.	Richard Krinsky	Whisper Jet Inc.
Lorraine Neal	AOP-200	John G. Babich	ARN-200

Sandy Liu made the opening remarks. He introduced James Erickson, Director of the Office of Environment and Energy, who welcomed everybody to the conference and talked about the importance of their input. He talked about the different reactions people had to helicopter noise, and related a story of one NYC resident who held the view that helicopter noise was a part of living in an urban area that he found appealing. He also talked about the problems of distinguishing military helicopter sound from domestic helicopter noise. He talked about the necessity of the national public and other agencies need to help with this matter, and that already several elements within the FAA are working on this problem. He told the group that new standards of noise are being discussed and should be decided by January 2001. Announced that there will be a second public meeting on October 20, 2000 and a need to report back to congress next spring.

Mr. Liu then introduced the peopled involved with this conference, and showed slides on the study done on Section 747 Nonmilitary Helicopter Noise. He briefly discussed each slide (see attached). Mr. Liu then introduced Chris Roof who presented slides outlining the study that was done on helicopter noise in the greater New York area. Mr. Roof explained how this information was collected, where it was collected from, and the reason that location was chosen. It was felt that Liberty State Park in New Jersey was the ideal situation to study this matter and was representative of urban areas throughout the U.S.

There followed a brief Q&A session:

Q (Irene Howie)

Did you break it out by helicopter operator?

A It was very hard to say at any given time what operator was flying.

Q (Joe Corrao)

Are you doing another study?

A Not at this time.

Q (Ella Atkins)

Did you monitor aircraft situations? Was there anyway to tell whether or not they were currently using any of the noise lowering mechanisms that are available just to the pilot as a way of flying?

A We didn't have any way of knowing that.

Q (Ella Atkins)

So you really don't know if implemented it would change that city's amount of noise.

A That's correct, based on any individual aircraft.

Q (Joy Held)

Will any attempt be made to quantify the number of helicopter flights in NYC airspace—quantify the amount of traffic?

A This was not a part of the study. Did not focus on this.

Q (Irene Howie)

Just to follow up on the question I asked you earlier, in terms of identifying which operator or industry segment was involved in these flights; did you at least for purposes of further research perhaps get registration numbers on various helicopters?

A May be a couple. It was very difficult with the glare of the sun off the water. To put it in perspective, from our point of view for this part of the study, we just needed to identify the type of craft and the distance and speed that will help us collect our source data. We are working with local ATC to get data for the period we were there, its unclear as to how many of the helicopters will make it into the database, but from that we will try to correlate it with our measurements so that we can get further information.

Mr. Liu made some final remarks explaining further what this study was trying to do, and what the data collected will be used for. He explained that they are going to assess this data and get a broader picture, to be used to look at levels as well as systems, and assess the different ways to tackle the subject.

15 MINUTE BREAK

Reconvened after 15 minutes. Mr. Liu announced that we were going to go through the comments that were submitted to the docket. He explained that the docket was organized chronologically as the comments were received. He requested that the speakers step up and speak to the microphone, and sign their names for purposes of properly recording themselves.

Comment #1: Sgt. Steven Smith, Ontario California Police Department

Not present

Comment #2: Jerome Margarten, The MARCH Coalition Fund, Inc.

Not present. He had called to check on his deposition, and Mr. Liu told him it would be included in the "Report To Congress".

Comment #3: Thomas Riffe, Springfield, VA

Not present

Comment #4: Wayne Williams, Sherman Oaks, CA
Not present

Comment #5: Laurie Ferguson Craig, Juneau, AK
Not present

Comment #6: Bruce Silverman, Portland, OR
Not present

Comment #7: Brent S. Shiner, City of Hayward, CA
Not present

Comment #8: Pete Riedl, Robinson Helicopter Company, CA
Not present

Comment #9: Mike G. Rees, Seattle Council on Airport Affairs, WA
Not present

Comment #10: Randall H. Walker, McCarran International Airport, Las Vegas, NV
Present but no comment

Comment #11: Joy A. Held, Helicopter Noise Coalition, NYC

Ms. Held said that the Helicopter Noise Coalition of NYC was formed in 1997, a citywide group with over 25,000 members. She said they were pleased that this study was being conducted but they are extremely distressed by the focus of the study, the pilot study, and the way that solutions are being conceptualized. People who are disturbed by helicopter noise are not fringe people. People complain in large numbers because their lives and health are being severely disturbed. With regard to the focus of the study, it asks what types of helicopters are disturbing people—the fact is that all types of helicopters disturb people because helicopter noise is noise regardless of the mission of the helicopter. It is not just a question of densely populated city residents; we get complaints from throughout the U.S. And not just the continental U.S., we get complaints from large and small cities, rural areas, and from people who try to enjoy wilderness areas and cannot because of the helicopter problems. When people call us they are complaining about all helicopters, military, news, emergency, individual recreation vehicles, and so forth. People in Alaska and Hawaii are severely impacted also.

The fact that congress has restricted this to military is understandable, but nevertheless I believe that the military issue also needs to be addressed because these helicopters are very problematic for people who live near bases and so forth.

In summary because there was no public scoping session and the data analysis was complete before the original comment period was even concluded the public has had no input into how this study was designed. Therefore in our view it does not reach or satisfy the mandate of the actual legislation, which says "The Secretary of Transportation shall conduct a study on the effects of nonmilitary helicopter noise on individuals." It does not say residents of large cities, or the continental U.S., and it says "the effects of nonmilitary noise on individuals".

Which gets me to point number two, the pilot study that's been conducted in NYC. Where are the measures of the effects of noise on individuals? There is no attempt here to quantify the effects of noise on people.

That's what the study was mandated to do. Congresswoman Carol Maloney who was one of the originators of this legislation has stated that exact point in her comments in letter to Jane Garvey protesting this study. This study does not do what it is supposed to do. Now what we feel is necessary to satisfy this mandate is that there has to be a survey of people who are affected asking them what affect this noise has on their lives. Then it has to be measured internally in homes, in schools, in hospitals, and so forth to quantify what people are actually experiencing. There has to be external measurement not only at Heliports but on quiet side streets, in parks, at a public monument and so forth. There has to be a very thorough review of the literature that documents what aircraft noise does to people in terms of themselves, their functioning and their well being. We need accounts of helicopters in airspace because until we know the magnitude of the problem we can't begin to wrestle with what do about it.

In NYC in case you are not aware, there are three heliports now functioning, but in addition to the take-offs and landing at those heliports, we have countless numbers of flights that go over the city. When I say countless, what I mean is that nobody counts them, so we don't begin to know how much noise there actually is. We have suggested in our comments that a panel/advisory group will be appointed to have community input into the conduct of this study. That a real pilot study be done in NYC with the input of scientists and community people who are knowledgeable about this subject so that we can start to document what it is that people are experiencing. Because to ascertain the noise that is being generated, that is just the output of the problem. This legislation asked us to look at how that noise is affecting us, and that is completely lacking from what is being done here, except for the public comments which are being solicited.

Public comments are all good and well but they are not a focus study, they are not a pilot study, and we feel that this is an egregious error here and a terrible omission that negates the intent of the legislation. When we get to the issue of recommended solutions, I would like to say that this is not a question of volunteer compliance, or a question of flying neighborly. We have had the flying neighborly program in NYC for quite some time, and I am here to tell you that a helicopter flying over my head and over my home is not neighborly. A helicopter in the airspace where people are trying to live, work and recreate is not neighborly. People and helicopters do not co-exist.

Helicopters are too noisy and given the requirements to keep them in the air they will always be too noisy to be in a residential area or near people when they are trying to live their lives. People do not want to live their lives in the concept of company with a helicopter. So the whole way that this is being phrased is, in all honesty, very detrimental to the public interests. It is not just a question of air traffic control, although they are of course important, its not just a question of getting technology to lower the noises, there are many other areas that need to be explored in terms of solutions.

For example, legislation: The Helicopter Noise Control and Safety Act has been introduced several times into congress, it has not yet passed. We need legislation on the national level to start mandating what kind of controls can be put in place. There are other kinds of legislation that speak to this issue that are on the boards such as The Quiet Community Act and the reopening of the Office of Noise Abatement and Control. These are the kinds of national efforts that we need to start addressing attention on this issue in a way that would make it different. Because as Rep. Nadler of NYC has put it, "helicopters constitute a hole in the regulatory net," At this point in time a helicopter can hover outside my window for four hours and there is nothing anybody can do about it. Now this is wrong. By looking at ATC procedures and at technology, we are not addressing the whole problem. We specified many; many times regulations we think should be put into place. You can read them in our testimony.

With regard to altitude routes hovering and so forth, the question of whether the study that was done identifies the helicopter mark was raised, we need helicopters marked in the way that they can be identified from the ground. Otherwise how can the public tell who is disturbing them? The noise of the news media has been mentioned. When they cover major events in NYC they stack for hours. Communities have unbearable noise for hours and hours, as seven or ten helicopters are stacked above them. This is totally unsatisfactory, and there must be a cooling mechanism. In fact when Channel 7 came to the Borough's President Task Force Meeting a few years ago, the executive said that they would be willing to get rid of their news helicopter if the other stations would follow suit, because they are just too expensive to maintain.

That is the kind of inquiry that should be done in this study, looking at creative solutions to eliminate the problem, not just reduce it by a tiny percentage.

In terms of policy issues: we're hoping for a stage three-helicopter requirement. We feel that the FAA has to start investigating new noise measuring, because the LDS does not see to what people experience. People do not hear averages, they hear single events. The LDS does not look at the low frequency vibration of the helicopter noise which is so very disturbing to people. We also note in our petition that the Mayor and the Governor have come out with a policy banning tour helicopters from taking off and landing in NYC. This mandate is being phased in over time and NYC has asked the FAA to be released from the federal grant assurance requirement that the downtown Manhattan heliport accommodate all helicopters until the year 2007 when that ten year period runs out. The city wants to be released from that so that they can implement their policy of banning tour helicopters from NYC. The FAA has declined, and we ask the FAA to consider that again.

The Governor has spoken, the Mayor has spoken, and the residents of NYC have spoken, and we need relieve from this problem, and we are asking the FAA's help. So far all the FAA is doing is telling us that they must protect the rights of the industry. What about the rights of the residents?

What we are saying is that mandatory regulations are required not voluntary regulations. We have had voluntary regulations in NYC for sometime, they do not work. The industry tells us that they are flying over the rivers, but we see them flying over the avenues with great frequency. Volunteerism is all very well, but not when health and functioning are at stake. In addition to mandatory regulations there has to be an enforcement mechanism, otherwise it's useless. So what the NYC Helicopter Noise Coalition have been advocating for since our inception is the institution of a non-emergency no-fly zone in NYC. We do not want non-emergency helicopters in our space because we cannot co-exist with them.

Unfortunately we do not have the deep pockets of industry so we could not bring many members to Washington today, but you will be hearing from more of our members since the comment period has been extended. What these people will tell you is how helicopters makes their lives impossible. How they cannot sleep, they cannot work, their children cannot learn they cannot function, they cannot speak in their homes and be heard, and they cannot enjoy their recreation. They cannot live and coexist with this atrocity and that is why we feel that this study is so very important and should be done correctly, to the mandate of congress. So we urge the FAA to think again, to look at our comments and the comments of other community groups and do a meaningful pilot study in NYC which does not have to be that expensive. We are certainly willing to give our experience – we did a noise study in NYC in the apartments of people who live 250 ft from the E 34th St Heliport, and we found decibel levels of 94 decibels on terraces and 86 decibels inside apartments. Now people living with 86 decibels noise from helicopters inside their apartments is totally intolerable.

We are saying that this is an opportunity to do something meaningful both in terms of conceptualizing the problem, documenting the problem, and looking at proposed solutions to the problem. We urge the FAA to broaden their efforts and to do a real study that is asked for and demands to be done. Thank you very much.

Comment #12:Dawn Mancuso, Association of Air Medical Services, Alexandria, VA
Not present

Comment #13:Carolyn B. Maloney, Congressional Rep. from 14th District, NY
Not present

Comment #14:M.E. Rhett Flater, AHS International, Alexandria, VA
Represented by John Leverton

As you are probably aware we are a technical society with 6,000 members in all the major manufacturers in the U.S. and Europe. AHS members, including the manufacturers, really appreciate the need to address this issue; this has been discussed in the industry for many, many years now. For the last two years AHS has held two conferences to try to address some of these issues. Some of the comments I want to pick up on, and some of the comments in the deposition, which you can read, come from those two meetings.

One of the important aspects I think is the fact that in addition to the amp level, the character and impression of the sound is equally important to what people observe when they encounter helicopters. Having said that, being a technician, the difficulty in trying to use a reading is that there is very little research done on people's adverse reaction to helicopter noise. There was a lot of work done in the 70s and 80s. We were just about to get somewhere, and then there were all sorts of reasons why that work was curtailed. Certainly we need to understand what causes this adverse public reaction to some of the helicopters.

What came out of these public sessions is that it is simply not a level issue as brought up by different individuals in different parts of the U.S. Helicopters with certain unique characteristics - I use the word tourism because they have a lower actual noise level - actually recorded more adverse reaction than some of the noisier ones. I think is fair to say that at present there is no known measure for rating or assessing the public response for taking characteristics into account.

The other thing that came out of the two meetings was that in addition to the character of the sound, was the fact that public reaction (I think there was a survey that has been done, some in Hawaii, half in the U.S. and some in Europe) is also tied up with concerns over safety. Very often these are perceived issues not real issues. So I think the AHS feels it is important to try to find a way to understand what the actual issue is.

A couple of other things to mention is that the manufacturers, in conjunction with NASA, have made considerable efforts in understanding the noise, and producing quiet helicopters. If you look over the history of recent years, you will see that the noise level of helicopters in general at the source point have actually decreased. Also there has been a lot of understanding of the source of noise. Many of the newer models have dramatically reduced noise levels. Remember that unlike fixed wing, it is not easy to retrofit some older helicopters but quieter models are being developed and coming onto the market.

Another point, which was picked up earlier on, was the military. Now we understand why congress went that way. However some of the responses that came out of the public meetings we had was that in a number of areas, military operations do have an impact on public acceptance. Many people, especially if they are indoors, cannot tell whether a helicopter is military, public, or what it is actually doing. So there is an inter-relationship with military and in some areas the public acceptance of private operations is colored by military

operations. Somehow we need try to sort out this because most of use cannot tell if it's a military helicopter or not.

I mentioned BVI, although there is a lot of work done on this, we still haven't got the tools to reduce its on helicopters. But here it has been shown that operational techniques can minimize it and technically eliminate this. This needs to be looked at. Also we don't as an industry or, may I suggest, the FAA, have very good tools for looking and rating noise. We have the FAA noise models and NASA trap noise models but they are not really tailored to what we are trying to do to look at public responses. They generate contours but you have no feeling. Certainly that is another area where we need to establish reliable methods. Also quite honestly we don't have a very good database of most levels of actual helicopters. It's no use going to the FAA noise model and try to use it with today's helicopters, its not a very satisfactory situation. We need these tools if we're going to mitigate and understand the issues.

Two final points:

- We are going to need to do a survey to establish types of operations that cause noise that people find annoying, as it may not be what we think it is.
- We would recommend a survey by the FAA in concert with NASA, to establish methods of actually rating these procedures.

We think the FAA should support the development of reliable modeling tools so that you can actually predict the subjective responses. At the moment it's a very crude process.

Another **operational aspect** discussed in our formal presentation, and I'm sure it will be addressed by HAI, and we fully support those areas related to, i.e., and **the process to fly higher and removing some of the current limitations. We would support some IFR type operations.** We also think we need some sort of public understanding as to why helicopters are there, understand the need for them, and what they are doing, and sometimes the characteristics of what they are doing in the night. **We think we ought to move to some sort of more flexible procedures, whatever you can, I'm talking about 1000 ft, 1500 ft up to 2000 ft which is very difficult in the current structure in many areas.**

Finally, the AHS appreciates the opportunity to respond to the agencies requested and look forward to supporting this effort in the future. Thank you.

Comment #15:Dan Saltzman, City of Portland, OR

Not present

Comment #16:Troy Gaffey, Bell Helicopter, Fort Worth, TX

Not present

Comment #17:Roy Resavage, Helicopter Associate International, Alexandria, VA

We are the trade association that represents the helicopter operators throughout the world. We have about 1500 member organizations, our members fly about 5,000 helicopters, and do that for about 2 million hours a year. We represent a sizeable amount of the industry. We also represent the aircraft manufacturers that are here today and others that did not attend.

A lot of the ground I wanted to cover has already been done, so I won't re-plow something that has already been covered. I want to tell you that the helicopter industry acknowledges the fact that noise is a consideration to the people on the ground. We have to be very careful how we operate our aircraft and how we manufacture it, to be attuned to the needs of all folks. Not only the people using the products, but those that do not feel they have a direct benefit from these services. I want to tell you that I do not accept the premise mentioned earlier that anything other than emergency medical helicopters are of value. The helicopter industry brings great value in many different areas and the quality of our lives would be severely changed if helicopters were eradicated from the entire system.

I do want to follow up on what John Leverton said that the manufacturers are going to extraordinary efforts to try to reduce the amount of noise and sound energy that the aircraft emanates. There are new stringency requirements being considered and we wholeheartedly endorse those. We believe that the industry should be challenged and pushed to the maximum limit possible within engineering and economical restraints of what they can do to make the aircraft as quiet as they can be. Again, these are new aircraft that are coming off the line and yet to be developed and designed. There will be some relief, but we also have thousands of aircraft that do not have the most advanced sound quieting techniques, and they are going to be with us for a long time. These are very expensive aircraft and they are not going to be put aside waiting for something better to come along.

The question is – how do we deal with the aircraft that are currently in the system to allow society to have the benefit of helicopters and not be an annoyance? We believe that there are many things that can be done to mitigate the impact of the helicopters that are fairly inexpensive, low-tech solutions that will certainly help the process while we are waiting for quieter aircraft to be developed.

We believe that there are many things, and I'll go into some of them – of course they are listed in our paper and I won't reiterate all the bullet points. **We believe that through proper route structures, expediting our entry and exit into the IFR system, allowing us to operate at higher altitudes will certainly decrease the impact on people that don't want to hear helicopter operations.** Without over simplifying it, I just want to leave the thought in your mind that in almost every instance if we can fly higher we will greatly reduce the sound that is received by the people on the ground, and diminish the impact of helicopter operations.

In relation to the first speaker that spoke today, I'm not going to comment. I can tell you that we obviously have honest differences on how we view the world. But one thing we do agree on is that the study the way it is currently envisioned is not going to answer the problem. I agree with you on that, I'm not sure we agree on anything else.

We believe, as already stated that we don't know when we get complaints if they are related to military or whether they are commercial. We cannot differentiate by the mission that's a red herring, the aircraft have multi-missions, what they do in the morning may be different from what they do in the afternoon. It's very difficult to attach a stigma to one type of mission more so than the other. It really doesn't take us where we need to go.

The fact that some people find a certain maneuver or procedure annoying does not mean that everyone in the community does. As James Erickson said this morning he gave an example of extreme position where a person he knew enjoyed the sound of the helicopter operating. There are certainly people at the other end of the extremes that don't want to hear any noise at all; there is no acceptable level of noise. As a matter of fact if they see an aircraft fly over, just a contrail in the sky will be enough to annoy them and as John Leverton has written in the past, they will find this unacceptable.

So we have those beds of the extreme, but I would say to you that somebody that listens to a police helicopter circling a neighborhood may find that very annoying, especially if its late at night. However, perhaps the residents that live there feel a great amount of security knowing that the helicopter is doing something about their security and is going to help them have a better quality of life. Someone maybe very upset when they see a EMS aircraft make one or two passes in a congested area, to make sure its safe to go in and pick up someone that's been in an accident. However the person on the ground, their loved ones and their family think it's a wonderful thing to happen. So again it is in the eye of the beholder

What we believe is that the FAA needs to have some type of study done. Again John touched on the technical aspects of what the FAA and NASA and different folks need to do for the appropriate method of collecting this data from the sound perspective. But we would also challenge the FAA to come up with the proper social science perspective that our first speaker commented on as well. You need to find out what really is annoying to the people out there. Just getting a technical measurement of the sound doesn't answer the question. Is that sound annoying to people? When is it annoying? Why is it annoying? How does it affect your life? How does it make your life better or worse, and what can we do about it?

I think that with the direction the FAA has been charged with, their limited funding, and what they can do right now, they're trying to take a snapshot with the sound studies. But I think you would admit that it is a rather unsophisticated study. To assume that microphones placed around a pier that is on water is going to record the same thing that somebody would hear in the middle of the city where you have all types of sound scattering that mitigate that, it's a totally different scenario. I know what you are trying to do I guess my fear is that by taking a look at that snapshot the system will try to extrapolate that over a large area and you'll end up with worse data than if you did no study at all.

I would certainly challenge the FAA to re-look at how they do this. I would certainly suggest that they do it in conjunction with some type of university-based study, where you have people that are really well versed in social science, and know how to professionally prepare the appropriate survey, and can collect the statistics and analyze them correctly. Also have some type of study that is available for peer review, because if you don't have something that is available for peer review then you are always going to have a question of whether is smacks of bias for one side or the other. We would be very happy to see the FAA move in that direction and provide whatever input we could to help in that light.

One of the things I touched on briefly before and would like to get back to is that in almost every situation if **you can fly higher it will make the situation better. We realize that in densely populated urban areas normally around class B airspace, it is very difficult for a controller to do.** I want to direct these reports basically to ATC procedures because that is the fact that the study purported to do so I'm going to get on that a little bit. I realize the difficulties of operating helicopters in this environment, you want us to stay clear of the arriving and departing aircraft for obvious safety factors.

I would challenge the ATC to come up with better techniques, and have a better understanding and a better training program to learn what the unique characteristics are of a helicopter, what we can and cannot do. Where we can fly, what our limitations are. **Try to figure out the appropriate (again working with the community, the industry and the FAA) type of VFR corridors and checkpoints. To try to move the aircraft to the least objectionable routing that will disturb the least amount of people,** but still allow the industry to provide the vital service that needs to be done. NY has made great strides in trying to work with the community, trying to find out what the problems are and make the adjustments required to fit in as much as they can.

IFR was talked about briefly. The technology is **developing rapidly with the GPS revolution and we have in the new aircraft coming off the assembly line more and more IFR capable. We would like to see enhanced development by FAA on better and more efficient ways to get helicopters into and out of the IFR structure.** The way the current system is designed is very archaic. If we're not taking off from an airport its very difficult to get in that system. **If you wanted to part someplace other than the end of an instrument approach to an airport its very difficult to get out of the IFR structure.** There is a lot of what we do that we cannot do in the IFR structure. I don't want to say that that's the panacea for all our problems, but I'm saying that **we can work with the FAA to develop procedures that will get us in the system.** Which will get us 3, 4, 5, or 6 thousand feet above the ground where sound is not going to be a problem. Again, if you're the type of individual that if something flying overhead bothers you, I can't do a lot about that, but we can certainly do a lot about the sound if we can get in there.

Even as we speak there are different committees and panels – there is a vertical flight meeting today – there are a lot of things that you think relate to sound, but they do. If we start devising techniques that set the minimum so high that we can't go in and shoot GPS point space approaches, or that we can't do GPSI departures, we are never going to be able to use the equipment that technology already exists to get away from the general public, and lessen the amount of sound energy in the air.

We talked about Fly Neighborly programs. I would say to you that there is a lot that pilots can do through this program. It's a very well thought out program done in conjunction with the manufacturers. There is a great difference in the way you fly an aircraft and the amount of sound you put out. You can't make the sound go away, but you can certainly through appropriate flying techniques that we advocate in the Fly Neighborly program, really reduce the impact on the community. And I think again that NY is a perfect example of how that can be done. Does everyone out there fly with Fly Neighborly techniques? Well I can't make that claim, but I can tell you that I certainly believe the lions share of the people do and we're getting more and more people involved and signed up every day. I can't tell you how many packets and information requests we get that we sent out literature involved that tells what air speed, what rpms, what rates of descent, what angles of descent, are appropriate for their type of aircraft. Again, to lessen the sound impact, where they should fly, how they should work with the community, and so forth. Again there are a lot of low cost options that can be followed, independent of the FAA to a certain extent.

Part of this study asked a bunch of rhetorical questions about how their regulations might affect the different communities if there were more stringent enforcement of regulations. We think there is a lot of room to change the process the way we handle aircraft, without restricting the community of the vital services they need.

Look at law enforcement aircraft, don't see these going away. There are a lot of missions they need to do that will keep them in close proximity to the general public while executing that mission that's charged to them by the government, to protect the local citizens. However, they are not always in a life or death car chase or something, contrary to what you see in Hollywood productions, so when they are not doing a mission that requires close surveillance, we would say they should be doing all the things we have talked about. They don't need to be in the breach all the time. When they need to be there, they need to be there. But when they don't the system should have the flexibility to operate them at a higher altitude and fly them away from people. We feel that they should be subject to the same constraints that the rest of the commercial world is when not actually doing a law enforcement mission.

Electronic newsgathering has been a fairly heated topic over the last year or two. It's a legitimate business, people want to see what they are feeding into their stations. Again I believe that you are not going to see the system get rid of all their helicopters anytime in the near future. I don't think that's a possibility. Are the

ways we can operate them smarter and more effectively so that they would have less of an impact? Can they operate at higher altitudes with the new gyro stabilized cameras and microwave systems that they have? Yes they can. Can they develop time-sharing techniques where they don't all have to be at the same scene, all shuttle in and out, work cooperatively? They probably could, there are certain business reasons that they don't do that. Is the potential there, is that something that could be formed in the future? I think it is. There are first amendment considerations. To say that you are going to ban all news helicopters because you don't like what they do is not a realistic approach. I think we need to figure out how to use them more effectively and lessen their impact.

Sightseeing is also a legitimate business enterprise. There are millions of people that want to see NY or the Grand Canyon or a number of other places. This is sometimes the only way they can see that, either through time constraints or physical constraints, they don't have the ability to see it any other way. It's a non-polluting, and we consider, a very environmentally friendly way to see the sights. I think the tour operators in NY have made a tremendous amount of adjustments to try to satisfy the citizenry in that area that what they are doing is responsible and is also providing a service that people want. Hundreds of thousands of people literally go on a tour every year because they want to see that great city, and this is a wonderful way to do it.

We look out in the Grand Canyon. There are approximately 5 million people a year that visit the Grand Canyon. Of these, approximately 800,000 see it from the air and there have only been one dozen complaints.

We believe that the primary solution is a training solution. The industry should play its part to educate pilots and the public. **We certainly need to get together with ATC and the FAA to figure out the best way to do this. We would be more than happy to host a meeting to discuss and develop these programs.**
Thank you.

Comment #18: Rosamonde Alisha Ritt, Federation of Citiwide Block Associations, NYC
Not present

Comment #19: David Augsbarger, Sherman Oaks, CA
Not present

Comment #20: Jon Newton, Hillsboro Aviation, Hillsboro, OR
Not present

Comment #21: Patrick E. Mallen, Whisper Jet, Sanford, FL

I'm the President and CEO of Whisper Jet. We manufacture a quiet helicopter – world's quietest helicopter. In previous lives I've been a tour operator in NY in both helicopters and seaplanes and I would say from a business point of view, the atmosphere in NY is not conducive to these businesses. Importantly even when we produced a business with a Cessna caravan on amphibious floats, extremely quiet aircraft, we were still driven out of business by the city. So we all have to be careful that the real agenda isn't necessarily noise, even though we talk a lot about it. There are people in these urban areas whose agenda is to get rid of all of aviation of almost any regard.

In any way the Whisper Jet is a remanufactured Sikorsky aircraft. It's remanufactured and modified extensively and in this process we reduce the noise level. The best way without giving you decibels, which we can produce that data of course, but if we were standing here today out in an open field and a Whisper Jet flew over our head fully loaded at 500 ft, you are not going to hear it. We've proved this many times. This

was all produced in response to the issues in the Grand Canyon – where noise is an issue. We have produced this aircraft, it is extremely quiet, we are manufacturing them now, and we will be delivering our second one to the Canyon on Friday of this week. We are producing about 6 a year right now; we may increase that if there is an interest in these aircraft.

Primarily devoted to the air tour market, but it has decent numbers for other enterprises as well. Having said that, if anybody has any questions about a Whisper Jet I'd be happy to answer them either here now or we can together later on.

Q *Do you quantify the noise level?*

A Noise levels are subjective numbers. We deal with them in terms of FAR 36, we are certainly well within that. We can get down – our whisper mode is as low as 61 d.b.a. on a fly over of 500 ft. This is achieved by taking the original three bladed rotor head and putting five rotor blades on it and then reducing the blade loading which, when you hear a Bell helicopter flapping by that's what you're listening to. We reduce the tip speed of the blade about 10% over the original design. The engine is a turbine engine, a successively derated engine, about 40% derated, it has a silencer on it and then the engine is contained inside a cocoon of noise denting material. There is some other noise denting material built into the aircraft as well. The result is that on these flyovers the noise is extremely low. It is really noticeable, when it goes by you will be amazed at how quiet this aircraft really is. We are producing are producing the third aircraft which is going to be used for demonstration purposes, and I hope to have that on the road by October 1. We will be going into some major urban areas and demonstrating the quietness of this aircraft.

Q *What is the cost?*

A Right now the commercial version is going to sell for \$1.6 million. That's a zero time, remanufactured aircraft.

Q *What is the seat capacity?*

A It's a nine passenger aircraft. Primarily built for the air tour market. It has large doors on each side, and the doors are full glass doors, full plastic. We even have a window in the floor so you can look straight down. I have to tell you if you have ever flown a helicopter flight in Grand Canyon and looked straight down out of that window its unbelievable.

Anybody else? Thank you

Comment #22:Ellen Gabelman, Lake Balboa Neighborhood Association, Van Nuys, CA
Not present

This is the end of the first set of comments that came in by the original Docket date of July 24, 2000. Since that time the period for comment was extended.

Comment #22a:William W. Weller, Hayward, CA
Not present

Comment #23:Camille Carr, Sherman Oaks, CA
Not present

Comment #24:Matthew S. Zuccaro, Eastern Region Helicopter Council, PA

We certainly have first hand knowledge of the issues being discussed here today. It is pretty much a profile of our operations in the northeast corridor. I would like to try to address just a few of the issues – I might jump around a little, as I have a few notes jotted down. Some of the things that I think are relevant. Indications were that the FAA is only to protect the industry—that is absolutely not true. It hasn't been our experience at all. We have found that the FAA has addressed the issues of the industry and the community and the legislative input, and tried to do a very good job in a very complex situation. I think all those segments have been given the opportunity to express their input. The voluntary programs that we have which I would like to discuss, contrary to statements previously expressed – they do work, they produce positive results and we do meet the needs of the community.

Is it perfect? No. Is it 100% effective? No. We're working on that. But the results have been dramatic and have recognized and acknowledged by legislative leaders, by community leaders, by other industry segments and the FAA. I think the approach to try to establish prohibitive legislation and regulation is just a broad sweep of a brush to a problem that cannot be addressed in any way, shape or form with that type of approach. You actually have to go out and do the leg work, you have to do that actual oversight, you have to take a look at what the actual issue is and address it on an individual basis—community by community, and issue by issue. You cannot go out and say that all helicopters are bad, all helicopter operations have negative impacts, and by no stretch of the imagination can you say that the entire community is anti-helicopter or has a negative perception of helicopters. That is not the facts, nor what is out there, and if this study produces anything, I hope that is some of the stuff that comes out—what the actual issues are, and the magnitude of this problem.

It thinks the other thing is you have to take into consideration the dichotomy that we have. We certainly have members of the public who do not consider this an issue at all in any way shape or form. Those helicopters do not have an impact on them; they enjoy them, understand the economic benefit of them, and really have no issue with that. There certainly is a segment of the population that realizes that they do have impact on them, and would like it addressed. Those are legitimate concerns. I personally have witnessed a number of those, have gone done the fieldwork and oversight and there are issues that we as an industry need to address and to improve. We should act aggressively in response to these.

But when you get to the other segment that's when we have to be careful. The segment that would have as supported goals the closing of all heliports, restriction of all airspace in a metropolitan area such as NYC, and the elimination of all flight activity other than emergency services, is just not realistic. The concept that a major commercial center along the northeast corridor such as Washington to NY should not have any helicopter activity in any way shape or form, is just not a realistic approach to the problem. I think what I would like the study to do is find median and address everybody's concerns, legitimate or not, and try to come up with positive solutions to make these issues really mitigated to the satisfaction of the majority of the people.

There are a couple of things that I think are important. As I said we certainly acknowledge as an industry that there are issues to be addressed, but I can't clarify enough that have to be specifically addressed. Go out and do the leg work with the community and other groups. As far as air traffic goes, I think some of the things that have to be developed in terms of that relate to the ATCs training and orientation to its helicopter operations. In general I will say that the ATC relationship that we have in the northeast corridor is very

good. We have very aggressive response to our needs and the communities concerns and ATC does a very good job of handling those things and trying to balance them within an unbelievably complex aerospace structure. When you are operating in that corridor you start listing the levels of airspace, different types of operations that need to be addressed, and it becomes mind boggling at times. So its not just a simple solution to say lets do this and solve the entire problem, what we would like to do is have preferred helicopter routes, which we do have, developed in all the urban areas. If you have helicopter operations, the industry should work with the local community and the ATC to develop preferred helicopter routes. It should be published within the context of the helicopter route chart for that particular area.

The routes also need to be monitored and maintained for any changes that occur so that you can change and address those routes as need be through the years, things do not stay stagnant. Where possible ATC should facilitate requests for higher altitude where feasible, to facilitate the higher altitude operations. Again ATC should assign altitudes and routing with consideration for noise abatement unless the pilots mission dictates otherwise. This has been a big thing with us, we started a policy when our aircraft request a particular altitude level, and we want to make a request for that altitude for noise abatement reasons. We like to have that stated when they are making the request. It educates the rest of the industry in that particular operating area that noise is a very important issue. It also indicates to the controllers as to why that pilot is making the request. We would like to have the ATC to have the latitude to take a request for altitude, possibly from a transient pilot or someone not familiar with the area, and to correctly, safely and legally indicate to that pilot that you are cleared on that route at this higher altitude. A lot of times people request altitudes and ATC clears it, but we would like to see more aggressive policy in terms of ATC assigning altitudes.

Helicopter access to the IFR system should be improved in terms of ingress and egress to heliports. That means to IFR procedures directly to or from the heliport itself. Hopefully this would eliminate the VFR transitional period where you have to operate at a lower altitude because of the weather to go from drop off point to get to the heliport. If we had this you wouldn't have the lower altitude transition point.

In place of any restrictive ATC procedures we coordinate these procedures with those noted in our response on a case by case basis in conjunction with established programs. We would ask that when you do that careful analysis, you mitigate/address the concerns of the community. It goes without saying that all industry segments and groups such as NASA, FAA and the manufacturers should fund and participate in a research program to develop technology advancements. These should be introduced onto the current fleet as well as future models, in an economically feasible manner.

In terms of military helicopters—absolutely they have to be considered. Military helicopters operating in an urban area and along the corridor in almost all cases are not actually conducting any mission restrictive type operations that are military in nature. They are normally doing passenger transport to and from a facility. They are operating in the same guise as civilian helicopters and have the same impact. The lay person does not distinguish military versus civilian helicopter. If they are not familiar with the Fly Neighborly procedures, and route structure, then it impacts negatively on the entire industry.

In terms of the missions and types of aircraft that are generating the majority of the issues. We have found that it was operationally driven—regardless of whose doing it. That seems to be the key for issues that have to be addressed. In operations that involve extended hovering whatever it might be for, it generates attention. Off-hour operations again draw attention. You have to keep monitoring them and trying to adjust situations. It is really this type of operation that seems to attract the most attention.

Mr. Zuccaro then presented overheads on some of the things being discussed and looked at. A national study that was done on NYC last year which addressed the heliports in the area, and some of the noise issues. Out

of that study came a Helicopter Oversight Committee which is a cross section of the various segments involved – the community, FAA, industry and legislative views. I think its important to realize what is being discussed up here, and what's going on. These are all critical issues.

Some of the things we have done. The routes on the overhead give a perception of the interface that goes on. The route that used to generate a lot of issues with the community were sightseeing operations up the East River, over Central Park and down the Hudson River. Those operations were in existence for roughly twenty years. After all that time based on many issues and a coalition of input from different segments, we established routes that now just operate on the Hudson River. This has mitigated the noise dramatically.

If you look at some responses from some of the community groups, water routes are not acceptable to them. If you start saying this, and overland is not acceptable, you might as well not fly in the U.S. That is the issue we really have to address. Where do we have a happy medium? These routes in general have dropped the noise complaints dramatically.

Another example is an old route that used to run across Staten Island. That operation had been there for fifteen years. Through our complaint hotline we started to get inquiries about the helicopter activity which had increased in the fifteen years. When we responded through our community outreach program, we found out that this area had developed dramatically over that fifteen years. When we started this operation it was a land fill and open space, now it is a vibrant community with homes and schools, and they had a legitimate issue that needed to be addressed. So we started a volunteer route and eliminated through our own Fly Neighborly program that existing route, and rerouted the aircraft, which took additional flight time and as an industry we are willing to accept, to minimize the impact. Now the route is all over water on both sides of the island. After a one-year trial we petitioned the FAA to remove that route off of the chart, and the original route no longer exists.

Volunteer programs work, and we get good results. You have to go out, do the homework and do the work. This is not going to be done in a study, you cannot wave a brush or restrict the entire airspace to only EMS aircraft. The other issue I think is important is we honestly believe that a lot of problems are mission derivative driven. I can't tell you how many times I've been told that EMS and law enforcement is okay. But if you are going to fly business men or conduct tours that doesn't affect me directly, I don't want to accept that, and am not willing to discuss that or mitigate circumstances. That is not realistic level of cooperation.

This program last year was one of the most extensive spraying programs for the west Nile virus in the country. The level of operations were evening spraying with a fleet of helicopters at unbelievably low levels which we would never consider doing because that was what was needed to put down the chemicals. During this period with that impact of noise, there were virtually no noise complaints generated from this activity. Everyone knew what was going on, and it was acceptable. So it is mission derivative most of the time when you look at these noise complaints.

Studies that were done by concerned groups indicate that there is no substantial or significant data relative to helicopter noise impact on communities. The study was relative to airport environments. If this study does anything, we want relative data, germane to the helicopter industry, and accurate to our operating environment. We don't want to be compared to 747s landing all day at a major airport. What we want is a helicopter flying over a NYC urban environment, and what that means in reality.

Through all of that I want to make clear is that I've done this long enough in different parts of the country and there are legitimate problems. There are areas we need to address and improve. We want to do that very aggressively because there are unacceptable levels of activity and noise that no community should have to

put up with that we generate at times. We think we have done a very good job of addressing those and solved numerous problems and we think that is the formula, to go out to the community and do this type of work. We want to keep it on a realistic, logical plain—the real facts, the real problems, the magnitude, and how do we address it. We will be responsible as an industry, we have been. On numerous occasions our efforts have been acknowledged and applauded by community leaders and legislators, and noted in the press. The NYC Master Plan recognized our efforts, and to give you a clear personal example, I was out on a community site studying a particular area relative to helicopter noise. In the course of that a third party approached and we explained what we were doing. The response was, "I live in this neighborhood and really don't care about the helicopters, why don't you do something about the ambulances from the hospital that run their sirens all night long". It's all in the eye of the beholder.

Let us be realistic about what we are doing here, we are ready to respond to the real problems, that's the message.

Comment #25: Thomas N. Jones, Chester, VA
Not present

Comment #26: Marcus & Marilyn Simantel, Portland, OR
Not present

Comment #27: David Allred, Leru Adams, Portland, OR
Not present

Comment #28: Arlen & Rita Sheldrake, Portland, OR
Not present

Comment #29: Gerald A. Silver, Encino, CA
Not present

Comment #30: Ann Bosma, Torrance, CA
Not present

Comment #31: Howard Perry Beckman, San Lorenzo, CA
Not present

Comment #32: Diana Schneider, NYC
Not present

Comment #33: John L. Martin, San Francisco International Airport, CA
Not present

Mr. Liu declared this the end of the submitted comments for this workshop. He asked if anybody would like to make any further comments after a break.

Ms. Joy Held request the opportunity to add a few comments:

I would like to add a few things. One of the things I neglected to mention was the study done by the Natural Resources Council on helicopter impacts in the tri-state area of New York, New Jersey and Connecticut, entitled "Needless Noise, The Negative Impacts of Helicopter Traffic in New York City and the Tri-State Area". I would recommend you look at that study, it goes into great detail about the health affects of aircraft noise and responds that studies of airplane noise are not relevant. Aircraft noise in general is very disruptive, and I'm sure people sitting in this room know, the public finds helicopter noise twice as disturbing as airplane noise at the same decibel level. So if airplane noise has health effects, one can deduce that helicopter noise is going to be even more distressing because people report it to be true. I cannot accept the claim that we disregard studies that have shown what airplane noise has done for people. I would agree that we must document helicopter noise persay.

This study documents all the regulatory holes and omissions regarding helicopter issue, so that we have asked them to submit their report to you. They have certainly submitted it to other components of the FAA such as the study that is being done on flight paths. I am sure that it will be forthcoming to you if it has not been already.

In addition we also submitted as part of our submission here the legislation empowering the GAO study in which they are doing a study of the airport noise in the U.S. They have very specific things they are looking at which we think are quite germane as well. They are being asked to look at the relevance of aircraft noise measurement methodology, the threshold of aircraft noise at which health becomes affected. That is the kind of thing that this study has been mandated to look at. This is not being done. We have urged the FAA to coordinate the existing study with the GAO study so that they look at the issue comprehensively.

There are a few comments I would like to make in response to some of the things that have been said here. With regard to the success of the Fly Neighborly program in NYC and the route changes. What the route changes have done is transfer the problem from one community to another. Now that the tours concentrate on the Hudson river, the people on the west side of Manhattan and New Jersey are negatively impacted, and we have continuous complaints. It's not just a matter of residents, it's also the waterfront parks. You cannot recreate in any waterfront park in NYC without getting constant helicopter noise. What is the point of this beautiful new Hudson River Park from the Battery to 59th Street, if that's a corridor for tour helicopters. Heliports and helicopter over flights do not coexist with urban parks. It makes the park a mockery.

To say that we are extreme – we are trying to protect the residents in NYC. If in fact these problems had been well mitigated, and if the Fly Neighborly program was so successful, why do we get calls day and night from people complaining that they can't sleep, can't function, the helicopters are making them ill, etc. etc. This is not a handful of people complaining, I asked if you wanted copies of our files, which are very extensive in terms of numbers of complaints, and I am willing to make them available. We are not manufacturing this, we are not pretending, and furthermore we get calls from all over the U.S. and our impression is that the other communities throughout the country are ripe to organize the way we have in a comprehensive way, to make elected officials do something. We work with a huge coalition in NYC who are as concerned about this issue as we are. We are not fringe weanies, we are trying to address a real quality of life problem.

There are communities throughout the country that have tried to get a ceiling and floor on helicopter flights which the FAA has been unwilling to provide. The FAA is not being responsive to the community complaints. Even if you fly at 2000 it is still very audible. We are not talking about the sight of the helicopter in the airspace, we're talking about the noise we experience. As one of the other speakers commented, it's not just a question of noise, people tell us that the vibrations cause their homes to vibrate, that they are experiencing structural damage because of the helicopter over flights.

The air emissions, there was a medical organization about to file suit to the 60th street heliport before it was closed because of emissions. The people living around the 34th street heliport have the same complaint. They say they get physically ill because of air emissions from that heliport. The NYU hospital and the Institute across the street from that heliport despite the installation of expensive air filters, still have a considerable problem. It's a question of noise and air pollution, and safety. People are very concerned about safety.

We have had people die in NYC. We have had helicopters crash into power lines where cars were incinerated, we've had the rotor fly off of a helicopter and kill people. We've had many, many accidents and near misses. We feel that we are being subject to a high degree of risk and that it is only a matter of time until a major accident in NYC involving high rise buildings, power lines, freeways, etc., and we feel that this is a very serious concern.

All of these issues are important. With regard to the number of people who complain. First of all people don't know where to complain. It takes a long time before they understand how to use the system and who to go to. We now have a central complaint line in NYC, which was a result of our activity and the Mayor's Master Plan, etc. When people say they are not getting complaints, people are complaining they just don't know how to register those complaints.

With regard to the number of complaints received in the Grand Canyon for every person who complains, you have hundreds more who are impacted but do not know how to complain, or don't take the time and trouble to do it. Even with regard to this study, asking for submission in triplicate as Gerry Silver pointed, you didn't mention him but he was submission number 29, Gerald Silver from the National Helicopter Noise Coalition in CA, he says asking for comments in triplicate is inconvenient for people. People should be able to call in or fax and so forth and so on. So I am suggesting that contrary to the assertions made here today, there is a large constituency out there who are not satisfied with the so called improvements, who are still experiencing problems. People cannot use their yards, there are people who cannot open their windows in the summertime because of the amount of helicopter noise. This problem is not solved.

People are routinely woken in the middle of the night and before they want to get up in the morning. The hovering problem is still a problem. You talk about the efficacy of what the helicopters accomplish, but what about peoples ability to live in their homes and work on their jobs? The news shots may be gorgeous from the air, but are they so important that they should disturb peoples health and quality of life? We survived before we had newsreel coverage. I personally was being used by an aerial shot of a helicopter of suitcases lying on the ground in an airport. Why that had to be done by air baffles me. There is a lot of room here for investigation of what is going on and there are other ways of monitoring traffic, there are other ways of getting news stories, and even a lot of police activity can be conducted in ways that are less intrusive to the community.

What I am suggesting is that this problem is far from solved. Why some improvements have certainly been made in NYC, we are grateful and acknowledge them, they have not solved the problem. People are still suffering and complaining, and I can document that with the calls and the letters we receive. This is a problem that will not go away by raising helicopters to 2000 ft. When we say keep the helicopters off the waterways. We are talking about the Hudson river and the east river because people live in the middle of the east river on Roosevelt Island and that is still a route for helicopter traffic in NY and they go right over the heads of those people. I was interviewed about the helicopter problem on Roosevelt Island and the TV had to keep repeating the same question over and over again because they could not hear me because of helicopter noise.

Toa claim that this problem has gone away is wishful thinking and certainly suits the economic interests of the operators. But it does not suit the quality of life and health issues of people on the ground. We are hoping that this study will begin to address the reality and not the manufactured solutions that the operators claim to have achieved. Every type of helicopter is still flying in NY and still disturbing people, and severely limiting peoples capacity to live and perform the functions they want to perform.

I will close by saying that I had helicopters going over my home every two minutes hour after hour – I have documented this on many logs and took them to the task force meeting. If you think that people can live with this degree of intrusion into their lives you are very mistaken, and you are just seeing the beginning of community outcry. I submit to you that as we have organized in NY, you will see other comparable to ours growing up all over the country. I know there is a group in CA and elsewhere. This is just the tip of the iceberg, people cannot live like this.

To look at the so called utility without looking at the cost to the community is a bogus approach and it is not going to fly, people are not going to have their lives intruded upon to this degree. When people hear helicopters overhead to the extent they do, it frightens them and gives the military analogy of the Viet Nam war, that we are being somehow hounded by this aircraft. The U.S. have used helicopters in that respect in other places to intimidate people on the ground. I hope you will take this issue very seriously and try to do something about it. Thank you.

Any other comments?

Mr. Matt Zucarro asked to be given the opportunity to respond.

I just want to make sure that we get it in the record. This is a study that we are referencing. In the U.S. there is not much helicopter specific health research that documents the relationship between helicopter noise and human health well being. Also there are no aggregate data regarding smog forming toxic air emissions from helicopters. This is a study that was referenced "Needless Noise". Also a recommendation from the study to the extent possible flight paths should avoid residential areas and fly over highways and waterways. We have done that.

It is not acceptable to some community groups, nothing will be. But this is what the study recommended and we're doing that and complying with it.

In terms of safety, the accident that was referenced happened over twenty years ago. The Master City Plan in New York independently done, determined that we were on an average eight times safer than the national average in our segment of the industry and the type of operations we provide.

The other thing that was interesting (here he used an overhead) the area that we are talking about in terms of where the helicopters are going over the residents that were just noted every two minutes. It's absolutely correct, there was a problem there the helicopters they were flying over this ladies residence and it was an issue and it was a situation that had to be addressed. Those routes were changed as I just explained. There are no longer helicopters flying over this neighborhood, they are over the waterways (Ms. Held interjected "and they are heard in the neighborhood"). That's the facts.

One thing I am very interested and encouraged in is that the indication was that we would be in receipt of the files and complaints relative to what the helicopter noise coalition has received, and the membership

information about who are actually in the groups. This would assist with a study. I would look forward to receiving that and reviewing it so that we can move forward in a positive manner.

Mr. Liu stated that that was the final comment and that the meeting would adjourn for lunch. There is nothing in the docket that we have not reviewed. He stated that he will be in the auditorium until 5pm to enable other people to make comments.

There were no further comments made during the rest of the day. The meeting adjourned at 5pm.